

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

The claims have been revised for clarity, and responsive to the rejection under 35 U.S.C. § 112 which is believed to be moot. More specifically, the claims have been amended to recite that the steering actuator is responsive to a drive electric current related to a steering angle of the steering handle and is mechanically connected to the steerable road wheels, and that the reaction force control means increases the steering reaction force when the electric current to the steering actuator is restrained such that the force is increased to be larger than that corresponding to the drive electric current applied to the steering actuator while the electric current restraining means does not restrain the drive electric current to the steering actuator. Basis for these changes is believed to be evident throughout the specification.

According to a feature of the invention set forth in the claims, a reaction force control means in a steer-by-wire system increases the steering reaction force while the drive electric current is restrained when the steering actuator is in a state of being overloaded. The steering handle is thus harder to turn and cannot be turned excessively by the driver. For example, referring to the non-limiting embodiment of Figure 2, when it is determined at step S2 that the electric current is restrained, the steering reaction force is increased at step S3 by adding a predetermined additional force to the steering reaction force determined at step S1.

Claims 1-4 were rejected under 35 U.S.C. § 112. Additionally, Claim 1 was rejected under 35 U.S.C. § 103 as being obvious over U.S. patent 6,219,604 (Dilger) (the Office Action incorrectly cited this reference as 6,219,612) in view of U.S. patent publication 2004/0098180 (Von Hammel et al.). Applicants wish to thank Examiner Boehler for the courtesy of an interview on May 16, 2006, at which time the Office Action were discussed, as were claim amendments according to the present response. As a result of this discussion, it is

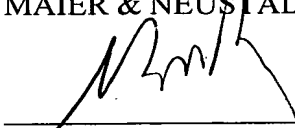
was agreed that the amended claims overcome the rejection under 35 U.S.C. § 112 and that Claim 1 defines over the applied prior art.

For example, as was discussed during the interview, Dilger et al. discloses a drive by wire system but fails to disclose drive electric current restraining means for restraining the drive electric current to the steering actuator while the actuator is in a state of being overloaded. Additionally, Dilger does not disclose that the steering reaction force is increased when a large load is experienced, for example by the wheels being pushed away from a curb. Dilger et al. instead teaches the opposite: that the feedback actuator "should only be able to able transmit those forces which arise during the normal operation of the vehicle," and that higher feedback torques should instead be fed back to the driver in a different way, for example by vibrating the steering wheel (column 7, lines 1-9). Moreover, Von Hammel et al., which was cited to teach current restraining means, is not a "steer-by-wire" system and so is not analogous prior art. It was therefore agreed that Claim 1 also defines over the prior art.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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